

### REMARKS

Applicant respectfully requests reconsideration and withdrawal of the objections and rejections in view of the foregoing amendments and the following remarks. By the present Amendment, claim 5 has been amended. Claims 1-34 are pending in this application.

#### CLAIM REJECTIONS—35 U.S.C. § 112

Examiner rejected claim 5 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Examiner claims that the term “outside” is unclear since a frame of reference has not been previously established. In response to this rejection, Applicant has amended claim 5 to eliminate the term “outside”. Therefore, claim 5 is now in condition for allowance.

#### CLAIM REJECTIONS—35 U.S.C. § 102

Examiner rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by *Svejkovsky et al.* (U.S. Pat. No. 6,286,665 B1) and *Svejkovsky et al.* (U.S. Pat. No. 6,193,050 B1). This rejection is respectfully traversed.

In the Office Action, Examiner states as follows:

Svejkovsky et al. discloses all of the claim limitations in a similar conveyor, particularly the conveyor comprises a gate (C4/L13-27) that can be partially opened and a control system for regulating the size of the opening based on a demand.

(Paper No. 8 at 3.) With all due respect, the prior art cited does not teach the elements of the invention as stated by Examiner. A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566,

1567 (Fed. Cir. 1990). None of the prior art references cited disclose a gate that is used to regulate the size of an opening to correspond to a demand for product.

Claim 1 reads as follows:

1. An apparatus for regulating a flow rate of product dropped from a conveyor, said apparatus comprising:
  - a gate for controlling a size of an opening in said conveyor wherein said gate may be partially opened to allow some product to drop through said opening while other product passes along a side of said opening for deposit in a subsequent gate on said conveyor;
  - a control system for regulating said size of said opening in said conveyor wherein said control system regulates said size of said opening based on a demand for said product to be dropped from said conveyor.

*Svejkovsky et al.* '665 teach away from the present invention because they disclose a gate mechanism that is either opened or closed. *Svejkovsky et al.* '665 do not teach that the gate can be partially opened, as is claimed by the present invention. *Svejkovsky et al.* '665 describe a gate mechanism as follows:

The conveyor 12 includes a gate mechanism 40 discussed subsequently for selectively opening to drop goods from the conveyor 12 on to the downstream conveyor DC. When the gate mechanism 40 is closed the goods move from the upstream portion to the conveyor 12 past the gate mechanism 40 and to the downstream portion of the conveyor 12.

(Column 4, lines 21-27.) *Svejkovsky et al.* '665 further discuss the selective operation of the gate:

The gate mechanism 40 may include an upstream plate 38 and a downstream plate 39 each rigidly attached to an upstream portion and a downstream portion, respectively, of the tray 12. The gate mechanism 40 also includes a flexible gate sheet 42 which, as shown in FIG. 1, is in its closed position for preventing discharge of goods from the conveyor 10. When the gate mechanism is closed, the goods thus move past the flexible gate sheet 42 to the right as shown in FIG. 1, i.e., to the downstream portion of the conveyor 12. When the flexible plastic sheet 42 is in its opened position, the sheet opening 44 is represented by the dashed lines as shown in FIG. 1. The opened gate sheet 42 discharges goods from the tray 12 to the downstream conveyor DC. Accordingly, operation of the gate mechanism 40 selectively moves goods past the closed gate mechanism, and discharges goods from the gate mechanism when in the opened position.

(Column 5, lines 11-28.) Thus, *Svejkovsky et al.* '665 do not teach a gate that may be partially opened to allow some product to drop through said opening, while other product passes along the side of said opening for deposit in a subsequent gate on said conveyor. Further, *Svejkovsky et al.* '665 do not teach regulating said size of said opening in said conveyor wherein said control system regulates said size of said opening based on a demand for said product to be dropped from said conveyor. Because every element of the claimed invention is not identically shown in *Svejkovsky et al.* '665, claim 1 is not anticipated. Therefore, Applicant requests that Examiner withdraw the rejection of claim 1.

Examiner also rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by *Svejkovsky et al.* '050. Examiner states as follows in regard to the '050 patent:

*Svejkovsky et al.* discloses all of the claim limitations in a similar conveyor, particularly the conveyor comprises a gate (46) that can be partially opened and a control system for regulating the size of the opening based on a demand.

(Paper No. 8 at 3.) Just as the '665 patent to *Svejkovsky et al.* does not disclose a gate which can regulate the size of an opening in a conveyor, neither does the '050 patent. In the '050 patent, *Svejkovsky et al.* disclose an in-line conveyor accumulator system and describe the operation in part as follows:

When the actuator 58 is in the retracted position, gate 52 is open and material discharges through the opening 54, as shown in FIG. 1. If the operation of a downstream conveyor DC is interrupted, the powered actuator 58 may be automatically energized to close the gate 52, thus prohibiting the discharge of goods through the opening 54 and causing the goods to move up the ramp floor 46. A control mechanism may be used for automatically closing the gate 52 if the normal operation of the downstream conveyor DC is interrupted for a period of, for example, longer than ten seconds.

(Column 6, lines 14-23.) Therefore, *Svejkovsky et al.* '050 do not teach a gate which can be used to control the size of an opening and a conveyor as is claimed by the present invention. The prior art discloses systems in which the gate has two positions, either opened or closed. The

systems of the prior art would not provide the advantage that is provided by the claimed invention in allowing a conveyor system to have a laminar flow of product down the conveyor. Because the prior art does not teach each element of the claimed invention identically arranged as they are in the claims, claim 1 is not anticipated. Therefore, Applicant requests that Examiner withdraw the rejection of claim 1.

### **CLAIM REJECTIONS—35 U.S.C. 35 § 103**

Applicants would respectfully remind Examiner that all limitations of the claimed invention must be considered when determining patentability. *See In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). The fact that a claimed element may exist in the prior art does not mean that the claimed combination is obvious in view of the prior art. Examiner must show some suggestion or motivation somewhere in the prior art to make the combination. Applicants request that Examiner indicate the suggestion or motivation that exists in the prior art that would motivate one with skill in the art to make the combination at issue. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

MPEP § 2141; *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

In determining whether particular references might be properly combined, whether it is obvious to try a combination is not a legitimate test. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988). The test is whether the combination of the references or

modification would be obvious to **do** rather than obvious to **try**. *In re Deuel*, 51 F.3d 1552, 1559, 34 U.S.P.Q.2d 1210, 1216 (Fed. Cir. 1995). A general incentive does not make obvious a particular result, nor does the mere existence of techniques which may be carried out to achieve the particular result. *Id.* A proper *prima facie* case of obviousness requires that the prior art reveal a reasonable expectation of success carrying out the proposed combination or modification. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). Both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure. *Id.*

Examiner rejected claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over *Svejkovsky et al.* '050. This rejection is respectfully traversed. In the Office Action, the Examiner states as follows:

Svejkovsky et al. discloses all of the claim limitations in a similar conveyor, as above, and further discloses a pneumatic controller having an input from a level sensor (98) and a pneumatic actuator (58) attached to said gate. Svejkovsky does not disclose the controller having an analog input from the level sensor.

As the specification is silent and to unexpected results through the use of a controller having an analog input from the level sensor, it would have been obvious at the time of the invention to one having ordinary skill in the art to have employed the use of a controller having an analog input since controller having analog inputs were well known of at the time of the invention. Furthermore, a controller having an analog input is immaterial to the invention since the applicant has state[d] that 'and controller that is capable of operating the three actuators to regulate the size of the opening is sufficient for the purposes of the invention.'

Regarding claim 10, Svejkovsky does not disclose the gate increasing said size of the opening by increasing a width of said opening.

As the specification is silent and to unexpected results through increasing the size of the opening by increasing the width of said opening, it would have been obvious at the time of the invention to one having ordinary skill in the art to have increased the size of the opening by increasing the width of the opening since increasing the width of openings in conveyor bottoms was well known of at the time of the invention. Furthermore, since the applicant has not shown criticality in increasing the size of the opening by increasing the width of said opening such an arrangement would have been obvious at the time of the invention to one having ordinary skill in the art since increasing the size of the

opening by increasing the width of said opening was well known of at the time of the invention.

(Paper No. 8 at 4-5.) Claims 9 and 10 are patentable for the same reasons argued above in regard to claim 1. The *Svejkovsky et al.* '050 referenced does not disclose the gate that is claimed in claim 1, nor does it disclose the control system that is claimed in claim 1. For this reason alone, claims 9 and 10 are patentable over the prior art.

Examiner claims that *Svejkovsky et al.* '050 disclose a pneumatic controller and a pneumatic actuator as is claimed by claim 9. Applicant respectfully disagrees with this assertion. When determining whether the invention is obvious in view of the prior art, Examiner must consider each and every element of the claimed invention. Claim 9 reads as follows:

9. The apparatus of claim 1 wherein said control system comprises:
  - a pneumatic controller having an analog input from a level sensor and a pneumatic output such that said controller determines said demand for said product based on said analog input from said level sensor; and
  - a pneumatic actuator attached to said gate for opening and closing said gate, wherein responsive to a determination by said controller that more product is needed, said controller moves said pneumatic actuator to increase said size of said opening, and responsive to a determination that less product is needed, said controller moves said pneumatic actuator to decrease said size of said opening.

Claim 9 claims a controller that "determines said demand for said product based on said analog input from said level sensor." *Svejkovsky et al.* '050 do not teach determining a demand for the product. The sensors disclosed by *Svejkovsky et al.* '050 determine the buildup of product in the accumulator and not the demand for the product down the line. Specifically, *Svejkovsky et al.* '050 describe the sensors as follows:

The conveyor as shown in FIG. 3 may also be provided with the sensors 98 and 99 as previously described, so that the travel speed of goods along the conveyor may first be slowed down and the conveyor operation interrupted if the product travels up the inclined ramp 66 to a selected level. When operation of the downstream conveyor is resumed, the ramp 66 may be lowered and actuation of the conveyor system 60 resumed, thereby discharging goods from the end of the conveyor (column 8, lines 34-42.)

The level sensors in *Svejkovsky et al.* '050 are used to stop the system if the accumulator gets too full while the downstream conveyor operation is interrupted. The present invention on the other hand, as claimed in claim 9, has a controller that determines a demand for product based on an input from a level sensor. This allows the controller to actuate the pneumatic actuator such that the gate opens to the size needed to deliver the product demanded. Because *Svejkovsky et al.* '050 do not disclose such a system or method, claim 9 of the present invention is not obvious in view of the prior art.

In regard to claim 10, Examiner acknowledges that *Svejkovsky et al.* '050 do not disclose the gate increasing said size of the opening by increasing a width of said opening. However, Examiner simply states that this would have been obvious without providing any prior art to support such a statement. Applicant traverses this assertion and requests that Examiner cite a reference in support of his position as required by MPEP § 2144.03.

Further, an objection on the basis that the "specification is silent" as to the expected results of increasing the size of the opening by increasing the width of said opening is not a valid objection, and even if the specification were silent as to the expected result, this in no way makes Applicant's invention obvious in view of the prior art. Nevertheless, the specification does discuss the anticipated results of the present invention:

The invention provides a laminar flow of product to the weighers by using a gate which regulates the amount of product dropped through the distribution conveyor to an amount that is equivalent to the flow rate required by the set of weighers/bagmakers associated with that gate. The gate is constructed such that it may be partially open to allow some product to be dropped through the gate while concurrently bypassing the remainder of the product. This results in a steady stream of product continuing downstream for deposit in a subsequent gate. Thus, the downstream weighers/bagmakers are not starved of product because of product voids on the distribution conveyor. Consequently, a higher throughput may be obtained with the same number of weighers while the amount of product recirculated is also reduced.

(Specification at 7.)

Applicant also discusses the effect of increasing the width of the opening in regard to the “finger gate” embodiment of the invention:

By controlling the opening 315 to regulate the product until a steady flow of product is achieved, a laminar flow along the distribution conveyor 100 and the cross-feeder conveyor 205 is provided. When only one or two of the fingers are open, some of the product bypasses the slide gate 215 for deposit through subsequent slide gates. Once product passes the slide gate 215, the vibration of the conveyor redistributes the product evenly across the width of the conveyor 100 before it reaches a subsequent slide gate. Thus, the flow of product downstream of the finger gate 215 is much more laminar than it is if the single-piece slide gate of the prior art is used.

(Specification at 10.) After reading Applicant’s disclosure, one with skill in the art would understand that by increasing the width of the opening rather than increasing the length of the opening, some product is allowed to continue flowing downstream. This gives the laminar flow that is more desirable than a piecemeal flow. If, on the other hand, the size of the opening is increased by increasing the length of the opening while the width remains the same, and assuming that the gate extends across the width of the conveyor, all of the product would be dropped into the opening when it is in any open position. This is the problem with the prior art. However, if the width of the opening is increased proportional to the demand for product, then some product may still flow by the sides of the gate while other product falls through the gate. Because the prior art does not teach an apparatus with all of the elements claimed in claim 10, claim 10 is not obvious in view of the prior art. Therefore, Applicant requests that Examiner withdraw the obviousness rejection of claim 10.



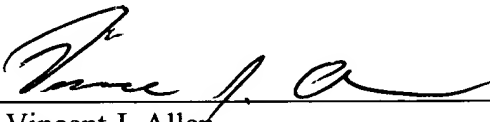
### CONCLUSION

Applicant has reviewed the prior art cited by Examiner in the Notice of References Cited in the Office Action and asserts that none of the prior art references, either alone or in combination, are relevant to the patentability of the Applicant's invention.

If there are any outstanding issues, which the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact Vincent J. Allen at 972-367-2001.

Respectfully submitted,

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